



Greywater Remediation and Recycling



This small, portable device is used to filter greywater water from field kitchen sanitation operations, reducing the amount of dirty water to be backhauled by as much as 90%. Using the device to recycle the wash water will reduce the amount of clean water consumed by as much as 33%.

Why is it Needed?

Field kitchen sanitation operations use approximately 250 gallons of potable water per day and generate an equivalent amount in wastewater. This greywater is either dumped on the ground or stored in tanks and backhauled for treatment. The practice of backhauling is a financial burden while dumping greywater in ditches is unsanitary and attracts pests and disease vectors. By remediating the greywater, 90% of the water is clean and can be reused or can be dumped on the ground while the remaining 10% of the water is concentrated waste for backhauling. Recycling the water will save an additional 33% in potable water by reducing the amount of water needed to perform sanitation.

Technology:

Ultrafiltration is a method of membrane separation that removes particulates having molecular weights between 10,000 - 200,000 daltons. It operates by running water perpendicular to the membrane, allowing the system pressure to slowly force molecules through the membrane, while the shear force of the water keeps the membrane free of particulate build-up. Ultrafiltration has been used in industrial applications for over 20 years, but only recently have systems been designed that are small, lightweight and suitable for military use.

Key Features / Benefits:

Water Quality...Reduces Biological Oxygen Demand (BOD) by 50%, Total Suspended Solids (TSS) by 100%, Oil and Grease by 95% and Turbidity by 90%.

Wastewater Reduction...Reduces volume of wastewater by 90%, the clean water can be recycled as wash water or safely dumped on the ground.

Lightweight...4-man portable and compact.

Simplicity...These systems are easy to use and maintain. A single switch turns them on.

Point of Contact:

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